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Entry into the National Phase of PCT/EP2004/053342

Appl. No. To be assigned Attorney Docket: I-2003.023 US

Amendments to the Claims:

1. (Currently Amended): Nucleic A nucleic acid encoding [[a]] the 26 kD Lawsonia intracellularis protein of claim 6, or a part of said nucleic acid that encodes an immunogenic fragment of said protein, said nucleic acid or said part thereof having at least 90 %, preferably 92 %, more preferably 94 %, even more preferably 96% homology with an nucleic acid having a sequence as depicted in SEO ID NO: 1

2. (Currently Amended): A DNA fragment comprising a nucleic acid according to claim 1.

3. (Currently Amended): Recombinant A Recombinant DNA molecule comprising a nucleic acid according to claim 1 or a DNA fragment according to claim 2, under the control of a functionally linked promoter.

4. (Currently Amended): Live A live recombinant carrier comprising a nucleic acid according to claim 1, a DNA fragment according to claim 2 or a recombinant DNA molecule according to claim 3.

5. (Currently Amended): Host A host cell comprising a nucleic acid according to claim 1, a DNA fragment according to claim 2, a recombinant DNA molecule according to claim 3 or a live recombinant carrier according to claim 4.

6. (Currently Amended): A 26 kD Lawsonia intracellularis protein, said protein comprising an amino acid sequence that is at least 90 %, preferably 92 %, more preferably 94 %, even more preferably 96 % homologous to the amino acid sequence as depicted in SEQ ID NO: 2, or an immunogenic fragment of said protein.

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Claims 7 - 8 (Canceled).

9. (Currently Amended): Vaccine for combating Lawsonia intracellularis

infections, characterised in that it comprises infection, comprising a nucleic acid according to

claim 1, a DNA fragment according to claim 2, a recombinant DNA molecule according to

claim 3, a live recombinant carrier according to claim 4, a host cell according to claim 5 or

a protein according to claim 6, and a pharmaceutically acceptable carrier.

10. (Currently Amended): Vaccine The vaccine according to claim 9, characterised in that

it comprises comprising an adjuvant.

11. (Currently Amended): Vaccine A vaccine according to claim 9 or 10, characterised in

that it comprises, comprising an additional antigen derived from a virus or micro-organism

pathogenic to pigs or genetic information encoding said antigen.

12. (Currently Amended): Vaccine The vaccine according to claim 11, characterised in that

wherein said virus or micro-organism pathogenic to pigs is selected from the group of

Pseudorabies virus, Porcine influenza virus, Porcine parvo virus, Transmissible gastro-enteritis

virus, Rotavirus, Escherichia coli, Erysipelothrix rhusiopathiae, Bordetella bronchiseptica,

Salmonella cholerasuis, Haemophilus parasuis, Pasteurella multocida, Streptococcus suis,

Mycoplasma hyopneumoniae, Brachyspira hyodysenteriae and Actinobacillus

pleuropneumoniae.

13. (Currently Amended): Vaccine A vaccine for combating Lawsonia intracellularis

infections, eharacterised in that it comprises comprising antibodies against a protein

according to claim 6.

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Claim 14 (Canceled).

15. (Currently Amended): Diagnostic A diagnostic test method for the detection of

antibodies against Lawsonia intracellularis[[,]] in a specimen, characterised in that said test

comprises comprising contacting protein or a fragment thereof as defined in claim 6[[.]] with

the specimen and detecting antibodies bound to the protein.

16. (Currently Amended): Diagnostic A diagnostic test method for the detection of antigenic

material of Lawsonia intracellularis[[,]]in a specimen, characterised in that said test-

comprises comprising contacting antibodies against a protein or a fragment thereof as defined

in claim 6[[.]] with the specimen and detecting antigenic material bound to the antibodies.

17. (New): The nucleic acid of claim 1, comprising the sequence of SEQ ID NO.1.

18. (New): An isolated protein having an amino acid sequence at least 90% homologous to the

protein of claim 6 and having the same antiserum immunoreactivity thereof.

19. (New): A vaccine for combating Lawsonia intracellularis infection, comprising a protein

according to claim 6.

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